

We claim:

- 5 1. A polyether obtainable from 1-butene oxide and an alcohol using a double metal cyanide compound as a catalyst, wherein the content of unsaturated components is 6 mol% or more.
2. A polyether as claimed in claim 1, wherein the content of unsaturated
10 components is from 7 mol% to 50 mol%.
3. A polyether as claimed in claim 1 or 2, wherein the alcohol used for the preparation is an alcohol having from 2 to 24 carbon atoms.
- 15 4. A polyether as claimed in any of claims 1 to 3, wherein the alcohol used for the preparation is a monofunctional alcohol.
5. A polyether as claimed in any of claims 1 to 4, wherein at least one of the following properties (A) or (B) is fulfilled:
20 (A) the polyether has a viscosity at 40°C of from 20 to 330 mm²/s;
(B) the polyether has an oxygen content of at least 15.5%.
6. A process for preparing a polyether according to claim 1 having a content of unsaturated components of 6 mol% or more, which comprises reacting
25 1-butene oxide and an alcohol with each other in the presence of a double metal cyanide compound as a catalyst.
7. The use of a polyether as claimed in any of claims 1 to 6 or of a polyether, obtainable by a process as claimed in claim 6, as a carrier oil or in a carrier

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oil formulation, wherein the carrier oil formulation has a content of at least one detergent of at least 10 % and can be an additive package for gasoline fuels.

- 5 8. A carrier oil formulation comprising at least one polyether as claimed in any of claims 1 to 5 or a polyether obtainable by a process as claimed in claim 6.
9. A carrier oil formulation as claimed in claim 8, which is an additive
10 package for gasoline fuels.
10. A fuel comprising at least one polyether as claimed in any of claims 1 to 5 or a polyether, obtainable by a process as claimed in claim 6 or a carrier oil formulation as claimed in claim 8 or 9.

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